

a connecting waveguide for connecting said microwave supply source to said proximal end portion of each of said antenna waveguides,

wherein a plasma is produced in said processing vessel by said microwaves introduced from said antenna.

8. (Twice Amended) A microwave plasma processing system comprising:
- a processing vessel having a microwave transmittable top wall;
 - an antenna for introducing microwaves into said processing vessel, the antenna mounted on said top wall of said processing vessel and having a plurality of substantially ring-shaped and substantially concentric antenna waveguides, each of said antenna waveguides having a substantially rectangular radial cross-section and comprising a proximal end portion, a terminal end portion, and a bottom wall having a plurality of slots formed at a predetermined interval;
 - a microwave supply source for supplying said microwaves to said antenna; and
 - a connecting waveguide for connecting said microwave supply source to said proximal end portion of each of said antenna waveguides,
- wherein a plasma is produced in said processing vessel by said microwaves introduced from said antenna.

17. (Amended) A microwave plasma processing system as set forth in claim 15, wherein each of the antenna waveguides has a substantially rectangular radial cross-section and includes a bottom wall having a plurality of slots formed at a predetermined interval.

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